



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,065	01/12/2001	Appadurai Thangaraj	4355D (DIV)	3120

7590

12/18/2002

Chief Patent Counsel  
Engelhard Corporation  
101 Wood Avenue  
P.O. Box 770  
Iselin, NJ 08830-0770

EXAMINER

NGUYEN, NGOC YEN M

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 12/18/2002

15

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/760,065

Applicant(s)

THANGARAJ ET AL.

A9-15

Examiner

Ngoc-Yen M. Nguyen

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1754

**DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 21, 2002 has been entered.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26, 28-34, 39-40, 48 are rejected under 35 U.S.C. 102(b) as being anticipated by CN 1,104,610 using Derwent abstract 1997-311,227 for the English abstract.

CN '610 discloses a bag for generating chlorine dioxide used to disinfect drinking water, fruit and vegetables, which is manufactured by steps including (1) melting Chinese wax, stearic acid, bees wax or paraffin wax; (ii) adding sodium chlorite to form microcapsules; (iii) mixing the dry tartaric acid or oxalic acid particles; and (iv) placing the mixture into a cloth bag (note English abstract). The cloth bag is considered as the claimed water insoluble membrane. When the bag is placed in water, the bag is considered as the second zone and the water is considered as the first zone. Since the tartaric acid as used in CN '610 is the same as the one used in the claimed invention, the pH of the tartaric acid when dissolved in water would inherently be below about 5 as

Art Unit: 1754

required in the instant claim 39 and the produced aqueous solution of chlorine dioxide would inherently have the same pH as required in the instant claim 40.

For the limitation of "at least a portion of said at least one metal chlorite and at least one acid forming component being in direct contact", the disclosed microcapsules in CN '610 are considered as the claimed "metal chlorite" because in claim 26 does not excluded a coated metal chlorite. It should be noted that the presence of the wax binder in the metal chlorite is disclosed (note page 19, lines 13-17). Alternatively, the stearic acid can be the second acid forming component, thus some of the metal chlorite would be in direct contact with the stearic acid.

The bag containing the mixture of wax, sodium chlorite and tartaric acid as disclosed in CN '610 anticipates the claimed device.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over CN '610.

The CN '610 discloses that the wax and the chlorite were formed into microcapsules, however, no size was disclosed.

However, the microcapsules as disclosed in CN '610 can be considered as tablets, powders, granules, pellets or agglomerates depending on its size and shape, especially because a wax (i.e. a binder) was used. It would have been obvious to one

Art Unit: 1754

ordinary skill in the art to optimize the size of the microcapsules of CN '610 in order to obtain the best results.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ngoc-Yen Nguyen whose telephone number is (703) 308-2536. The examiner is currently on a part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for this Group is (703) 872-9311 (for OFFICIAL After Final amendment only) or (703) 872-9310 (for all other OFFICIAL faxes). UNOFFICIAL fax can be sent to (703) 305-6078.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

N. M. Nguyen  
12/16/02

  
N. M. Nguyen  
Primary Examiner  
Art Unit 1754